

BEGINNINGS -

The Birth of the Arizona Wine Industry

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The Sonoran desert of Arizona brings to mind dramatic images of scorching heat, cactus, rattlesnakes, scorpions and buzzards. The average wine enthusiast would rank the state of Arizona pretty low on the wine list, if they included it at all. Jokes abound about wines made from cactus juice and rattlesnake venom, and it surprises many people that the 48th state boasts a growing, vibrant, diversified wine industry. There are currently 36 bonded wineries in Arizona with more on the horizon. But it hasn't always been that way.

It's an interesting story, the birth of our wine industry. Like all good western stories it has heroes, villains, bloodshed, heartbreak and a happy ending. So grab a glass of wine, preferably Arizona wine, and take a walk with me. While bits and pieces of this story exist here and there, I'm not sure it's ever been completely assembled in one place.

The beginning . . . First, let's set the record straight. Wine was made and consumed in Arizona long before anyone in California crushed a grape. The Spanish settlers arrived in the Nogales area more than 100 years before the California missions were established. In fact Arizona, along with Texas and New Mexico can be considered the oldest wine-producing region in America. At the turn of the 20th century, Arizona grew all sorts of grapes both for food (table grapes) and for the production of wine. Table grape varieties, Red Flame, Flame Tokay, Thompson Seedless, etc., do very well in hot climates and produce large yields of tasty fruit. The wine grapes at that time were primarily those of the Mission variety, named by the Spanish settlers that brought them from Europe and first planted them here. Prohibition ended wine production in most states, but Arizona's wine grapes were gone several years before when a state law was passed banning the production of all grapes other than table grapes. The anti-alcohol group that lobbied the formation of this law will show up again later in the story. So Arizona wine grape production went to sleep in 1915 and remained that way for 55 years, when it was awakened by a hydrochemistry professor named Gordon Dutt.

Gordon Dutt arrives . . . Gordon Dutt earned his BS degree at Montana State University and his MS and PhD in soil physical chemistry at Purdue. His first job was as an Assistant Research Irrigationist at the University of California-Davis, working on water corrosion problems for vineyard irrigation systems. UC Davis at that time offered the best viticulture (grape growing) and enology (wine chemistry) educational

programs in North America. UC Davis is still tops today and most California winemakers have studied there. Gordon didn't work in enology at UC Davis but his work did take him all over the state and he noticed the climates and soils in which the magnificent California vineyards thrived. He was working under contract for UC Davis when a faculty position opened up at the University of Arizona. Gordon applied and was hired as an Associate Professor to work on water quality issues in Arizona.

A common misnomer is that Arizona is too hot to grow grapes. About 40 years ago Arizona was a major producer of table grapes and grapes used to make raisins. Arizona's table grape harvest enjoyed a competitive advantage – it occurred between the harvests of California and South America, filling a short demand window. The market hates a vacuum; the gap was filled through modern agricultural technology and very few table grapes remain in Arizona. But in 1970 it was big business and one of Gordon Dutt's first projects was to help solve a problem farmers were having with their table grape vineyards in Yuma. When Gordon and his horticulturist partner, John Kuykendall,

solved the farmers' problems they became quick friends. Gordon was intrigued with the idea of planting wine grapes on the soils and climate of Yuma and convinced his new pals to put in some experimental wine grape vines. This was the first wine grape planting of the modern Arizona wine industry.

The project that lit the fuse . . . Gordon's next project was to try and "harvest" water in the Arizona desert. His idea was to capture rainwater by forcing it to run off the soil rather than being absorbed by it. The plan to achieve this was to add salt to the soil but he wanted some sort of aesthetically pleasing plant to establish in the barren waterways. The plant would need to be very hardy, deep rooted, water efficient and able to tolerate the drought conditions common in the desert. He figured that grape vines might work and would provide a cash crop as a bonus. So in 1972 Gordon planted Arizona's second modern wine grape vineyard at the Page Ranch, a research farm for the U of A now known as the Oracle Agricultural Center. The project was a major success; runoff from the salt-treated soil worked perfectly and the grape vines produced some fruit that looked very promising.

Gordon knew nothing about making wine, but with his chemistry education and a few books on the subject he figured out how to effectively ferment fruit, initially practicing on prickly pear cactus. When the Page Ranch vineyard grapes were ready, he made the wines at his



Dr. Gordon Dutt

Courtesy of Sonoita Vineyards

Tucson home since the anti-alcohol group mentioned previously made it impossible to create an alcoholic beverage on University property. When they were ready he assembled a group of wine evaluation experts to try them. The evaluation team judged the wines objectively, using the same 20-point evaluation scale that UC Davis created to evaluate the best wines in the world. The scores and evaluations were stunning, suggesting that these young wines were of similar quality to those being produced in California. Considering that the vines were planted with little thought given to current vineyard technology and that the winemaker was an amateur, the prospects for Arizona wine looked very promising indeed.

The first threat . . . Things had been going much too well. As nature loves balance, it was time for some problems. The vines at Page Ranch began to die mysteriously. With the help of his colleagues at the University of Arizona's Extension Service, the organization that supports local farmers, Gordon discovered that the problem was Texas Root Rot. This persistent fungus, common in the soils of the southwest US deserts, attacks the root systems of various plants, trees and shrubs. As the roots die the leaves are starved of water and the plants wilt away. Gordon was advised by his plant pathologist colleagues to abandon his project. He was told that the only way to control Texas Root Rot is to plant at altitudes above 5,000 feet or to add so much acid to the soil that it would kill the plants he was trying to protect.

Gordon did his own research and found that high acid soils did indeed kill cotton plants, the crop involved in most of the Texas Root Rot research. He knew that grape vines were very resistant to acid soils; in fact, many famous European vineyards are quite high in acid. Vines planted in high acid soils tend to produce fruit clusters with smaller berries, increasing the colors and flavors of the resulting wines. Gordon tried adding sulphur to the soil in the vineyard, increasing its acidity, and the vines once again thrived. From a wine perspective they might have even been improved. Disaster was averted.

Enter Blake Brophy . . . Blake Brophy was an owner of a large family ranch in the Sonoita area, 60 miles southeast of Tucson. The 24,000 acre Ignacio de Babacomari Ranch came to the USA by way of a land grant from the then young Republic of Mexico in 1832. The Brophy family was the current steward and Blake dropped into Gordon's office one day in 1975 to make an impassioned pitch to grow some grape vines on his ranch. Blake had traveled to Europe and saw many similarities between his land and the world-class vineyards in Europe.

He had previously contacted the University of Arizona Extension Services group with his grape vine idea and they had advised him that the monsoons in the Sonoita area would make such an endeavor difficult. They theorized that the high humidity caused by the summer afternoon storms would create mold and mildew problems in the grape clusters, a common problem in humid growing areas. Ironically, it is likely the cooling effect of the monsoons that would soon make Sonoita a world class wine grape growing area, but I'm jumping ahead. There

is an old legend that suggests Geronimo and his Apache Indian buddies massacred the Mexican ranchers working the Babacomari ranch to gain access to the terrific Mission grapes growing there. Whether Gordon believed that or not he was intrigued with Sonoita's 5,000 foot elevation and agreed to establish an experimental vineyard on Blake Brophy's ranch.

The Four Corners Grape Development Project . . .

At this point it happened. You know the "it," that wonderful, amazing, unexpected, serendipitous thing that always seems to happen when things are meant to be. Gordon got a call from the Governor's office suggesting a project to help stimulate the economies of the "four corners" states of Arizona, New Mexico, Utah and Colorado. It was suggested that Congress might fund a project to study the viability of growing quality wine grapes in the four states. Gordon agreed to take the reins and wrote the grant request. Congress, through the "Four Corners Commission," approved a \$95,000 grant to conduct the "Four Corners Grape Development Project." It was now 1976.

Gordon organized participants at the University of Colorado, New Mexico State University and a consulting company that had worked on agricultural issues for the University of Utah. John Kuykendall, the horticulturist Gordon worked with at the table grape vineyards in Yuma, had passed away and horticulturist Dr. Eugene Mielke now joined the team. Dutt and Mielke needed a trained winemaker so they traveled to California to look for one and do a little wine grape research. Dr. Harry Almo, a legendary enology professor at UC Davis, was close to retirement and had a favorite student whom he hoped would eventually take over his position. He recommended that this student, Wade Wolf, take on the Four Corners Project to fill the time until his UC Davis spot became available. Wade agreed and the Four Corners Project team had their winemaker.

Each of the three other states identified existing wine grape vineyards to source grapes from as well as planting new experimental vineyards. Being University researchers they took a very scientific approach selecting sites that represented different soil types, altitudes, climates and planted many different grape varieties. In Arizona, Gordon now had vineyards at Page Ranch, Yuma, the Babacomari Ranch, one he had planted at the Campbell Avenue Farm in Tucson and another in Safford he had planted to support some water quality research. Gordon decided to include a number of different grape varieties among his experimental vineyards including Barbera, Cabernet Sauvignon, Gamay, Pinot Noir, Ruby Cabernet, Columbard and Sauvignon Blanc. A small winery was built in the basement of a building at the Campbell Avenue Farm to make wine from Arizona's Four Corners Project vineyards and from the grapes flown in to Tucson from the other three states.

The best known quality wine grape varieties are those of the *vitis vinifera* species. Most of the Four Corners Project vineyards selected



Callaghan Vineyards in Sonoita

vinifera varieties for their vineyards but the species requires relatively cool growing conditions to produce the best grapes for making wine. The southwestern section of Arizona enjoys a higher elevation than most of the rest of the state, and a much less intense climate. Summer days are still hot, usually in the 90-100 degree range, but the summer monsoons temper the hot afternoon temperatures. The nights are cool, in the 60-70 degree range. This combination provides an ideal environment for quality wine grape production; the hot days insuring ripe fruit and the moderate afternoons/cool nights preserving acids, color and varietal fruit flavors. It is likely for this reason that wines made from the vineyard at the Babacomari Ranch were the best of the Arizona lot from the Four Corners Project.

Gordon was also impressed with the soils in the Sonoita area. Although the experts at UC Davis have long believed that soil plays a minor role in grape growing, Gordon didn't agree. He was a soil scientist by education and believed that soils were just as important to quality grape production as climate. The soil in Sonoita, now known as the Terra Rossa soil series, consists of acid soil with iron on the top (a distinctive red/rusty color) and lime below. Gordon believed this to be an ideal soil, similar to that found in the Burgundy region of France. It would seem a perfect complement to the excellent growing climate, similar to that found in many parts of Coastal California. He had great soil, a good climate and proof that excellent wine could be made from grapes grown in Sonoita. It was time to start making wine for real.

The early wineries . . . The first modern Arizona winery was bonded in 1980, the RW Webb winery. It was followed by San Dominique Winery in 1981, and Gordon Dutt's Sonoita Vineyards in 1983. With the assistance of Blake Brophy and a group of investors from South Africa, Gordon planted one of the first commercial vineyards in Arizona in Sonoita. While many of the early adopters struggled, as is common with pioneers, Gordon's Sonoita Vineyards was successful right out of the gate. His early wines won acclaim from consumers and well-known wine journalists such as Barbara Ensrud, Robert Parker Jr., and Jerry Mead. Sonoita Vineyards' wines also won medals at international wine competitions including InterVin and the New World International Wine Competition. Gordon's greatest tribute may be that his wines were selected by Los Angeles Times wine critic Robert Balzar to be served at the 1989 inauguration of George HW Bush.

Blake Brophy drafted the application for Arizona's first official American Viticultural Area (AVA) designation - the Sonoita AVA. It was approved by the BATF in 1984. AVAs identify wine growing areas which share unique, common characteristics and usually identify a general range of wine types and styles. Wines made from fruit grown in specified AVA territories can be identified as such on the label and the designation is intended as a guide to the consumer of what to expect from the wine in the bottle.

The second threat . . . Again things were going too well. It was time for Mother Nature to throw another tantrum. A bacterial plant malady called Pierce's Disease has been destroying vineyards in California since the late 1800s. The vine-killing bacteria are carried by a small mosquito-like insect called a sharpshooter, and as it feeds on the sap of grape vines it infects them. In the early 1980s the blue-green sharpshooter showed up in Arizona and promptly started killing the young vineyards by spreading Pierce's Disease. There is no known cure and the only effective control it is to keep the nasty little carriers away

from the vines. Fortunately, it turns out the blue-green sharpshooter is a relatively feeble foe. It can fly no more than 10 feet before it needs to eat again so it "hops" from plant to plant. If vineyard owners were able to establish a wide vegetation-free perimeter, say 20 feet, around their vineyards the insect would not be able to reach the vines. This was done with great success, but many early vineyards were already dead and the owners lacked the financial resources to start again.

In 1991 Gordon's Sonoita vineyard was completely destroyed by Pierce's Disease. He re-planted the vineyard but the new vines would take three years to begin producing commercial crops. Fortunately the Arizona wine momentum continued as Callaghan Vineyards was making big news in the wine world with their wines. Robert Parker Jr., the most influential wine critic in the world, listed Kent Callaghan among the "Wine Heroes of 1994" in his *Wine Advocate* publication. Kent was in good company on that list; many were among the top wine producers in the world. Other Arizona producers had also saved their vineyards from Pierce's Disease and were doing well. Another disaster was averted.

There is now a more serious Pierce's Disease threat - a bigger, stronger carrier known as the glassy-winged sharpshooter. This bug can fly much farther between meals. It is responsible for the destruction of much of the wine industry in Temecula, California and several other California vineyards to the north. There are methods to control the glassy-winged sharpshooter, such as the use of parasitic wasps, but most are expensive and difficult to implement. The dreadful little bug was discovered in Sierra Vista, apparently hitchhiking its way here on some imported plants. So far it appears not to have found its way to Arizona's vineyards, but the threat remains. Arizona's Governor Napolitano has been very supportive and funded research studies to control or eradicate the menacing insect.

The future . . . Many successful wineries followed, leveraging the accumulated knowledge of the early players. Arizona Vineyards followed in 1985, an interesting establishment in Nogales making wines from table grapes. Nahveh Vineyards (producing Kosher wines), Santa Cruz winery and Callaghan Vineyards were established in 1991, Dos Cabezas Wineworks in 1995 and Kokopelli Winery shortly thereafter. Naveh and Santa Cruz no longer exist but Kokopelli has been quite successful and Callaghan and Dos Cabezas have received rave reviews from top wine publications such as *The Wine Advocate* and *The Wine Spectator*. They have both had their wines selected for and served at the White House. Excellent growing areas have been discovered in other parts of the state and new wineries are opening to immediate success.

Dick Erath was one of the pioneers of the Oregon wine industry. After selling his successful and world renowned winery to Washington State's Chateau Ste. Michelle, he moved to Arizona. Erath is in the process of establishing Arizona's second largest vineyard to date, located in Cochise County near Willcox. Having a respected name in the wine world make a major commitment to Arizona wine production goes a long way in establishing credibility.

As for Gordon Dutt and Sonoita Vineyards, they are both doing just fine. California-trained winemaker Fran Lightly joined Gordon's team three years ago and continues in the tradition of fine Sonoita Vineyards wines. Gordon and Fran are both excited about planned programs with Sangiovese, the grape variety primarily responsible for Italian Chianti, and a return to Arizona's roots with wines made from the Mission grape variety.

The past is fascinating and the future looks very bright for Arizona wine.